WHAT IS CLAIMED IS:

1. A method for improved adhesion of an optical coating to a polarizing film incorporated onto an optical-quality plastic construct comprising:

exposing the polarizing film to a caustic solution at a concentration greater than or equal to 10% to treat the film; and

applying an optical coating to the treated film for effecting a coated, polarized optical-quality plastic part.

2. A method for improved adhesion according to claim 1, further comprising the step of making grooves on a surface of the film, wherein the grooves have a substantially uniform direction.

3. A method for improved adhesion according to claim 2, wherein the polarizing film has a stretch direction, and wherein the grooves are substantially aligned with the stretch direction.

4. A method for improved adhesion according to claim 1, wherein the step of applying an optical coating comprises dipping the film incorporated onto the construct in a solution comprised of the optical coating and withdrawing the film.

5. A method for improved adhesion according to claim 2, wherein the step of applying an optical coating comprises dipping the film incorporated onto the construct in a solution comprised of the optical coating and withdrawing the film.

6. A method for improved adhesion according to claim 3, wherein the step of applying an optical coating comprises dipping the film incorporated onto the construct in a solution comprised of the optical coating and withdrawing the film.

7. A method for improved adhesion according to claim 2, wherein the step of applying an optical coating comprises dipping the film incorporated onto the construct in a solution comprised of the optical coating and withdrawing the film, and wherein the film is withdrawn from the optical coating solution in a direction substantially perpendicular to the direction of the grooves formed on the surface of the film.

8. A method for improved adhesion according to claim 1, further comprising the step of peening a surface of the film.

9. A method for improved adhesion according to claim 8, wherein the peening step comprises exposing the surface of the film to plasmas or coronas of inert or heavy gases.

10. A method for improved adhesion according to claim 1, further comprising the step of applying an additional optical coating onto the applied coating.

11. A method for improved adhesion according to claim 1, wherein the optical coating enhances the optical properties of the plastic part.

12. A method for improved adhesion according to claim 1, wherein the optical coating enhances the mechanical properties of the plastic part.

13. A method for improved adhesion according to claim 1, wherein the optical-quality plastic part is selected from the group consisting of ophthalmic lenses, lenses, goggles, visors, shields, facemasks, polarized display devices, and windows that require low haze.

14. A method for improved adhesion according to claim 1, wherein the optical-quality plastic construct is comprised of a thermoplastic material.

15. A method for improved adhesion according to claim 1, wherein the film is comprised of polyethylene terephthalate.

16. A method for improved adhesion according to claim 15, wherein the film is further comprised of a crystalline or semi-crystalline naphthalene dicarboxylic acid polyester.

17. A method for improved adhesion according to claim 1, wherein the caustic solution has a concentration in the range of approximately 10% to 30%.

18. A method for improved adhesion according to claim 1, wherein the optical coating is selected from the group consisting of a thermal or ultraviolet cured hard coat, an anti-reflection coating, a mirrored coating, and an anti-fogging coating.

19. A method for improved adhesion according to claim 1, wherein the optical coating integrally bonds to the film after the step of applying an optical coating to the treated film.

20. A method for improved adhesion of an optical coating to a polarizing film incorporated onto an optical-quality plastic construct comprising:

forming grooves having a substantially uniform direction on a surface of the film;

dipping the film incorporated onto the construct in a solution comprised of the optical coating; and

withdrawing the film in a direction substantially perpendicular to the direction of the grooves.

21. A method for improved adhesion according to claim 20, wherein the grooves are substantially uniform.

22. A method for improved adhesion according to claim 21, wherein the substantially uniform grooves are formed by consistent pressure applied over substantially all of the surface of the film.

23. A method for improved adhesion according to claim 20, wherein the polarizing film has a stretch direction, and wherein the grooves are substantially aligned with the stretch direction.

24. A method for improved adhesion according to claim 20, further comprising exposing the polarizing film to a caustic solution to treat the film before the step of dipping the film incorporated onto the construct in a solution comprised of the optical coating.

25. A method for improved adhesion according to claim 24, wherein the caustic solution has a concentration greater than or equal to 10%.

26. A method for improved adhesion according to claim 25, wherein the caustic solution has a concentration in the range of approximately 10% to 30%.

27. A method for improved adhesion according to claim 20, further comprising the step of applying an additional optical coating onto the applied coating.

28. A method for improved adhesion according to claim 20, wherein the optical-quality plastic part is selected from the group consisting of ophthalmic lenses, lenses, goggles, visors, shields, facemasks, polarized display devices, and windows that require low haze.

29. A method for improved adhesion according to claim 20, wherein the polarizing film is comprised of polyethylene terephthalate.

30. A method for improved adhesion according to claim 20, wherein the optical coating is comprised of a thermal cured hard coat.

31. A method for improved adhesion of an optical coating to a polarizing film incorporated onto an optical-quality plastic construct comprising:

physically treating a surface of the film to create a substantially uniform surface;

chemically treating the substantially uniform surface by exposing the film to a caustic solution at a concentration greater than or equal to 10% to treat the film; and

applying an optical coating to the treated film for effecting a coated, polarized optical-quality plastic part.

32. A method for improved adhesion according to claim 31, wherein the step of physically treating the surface comprises forming grooves having a substantially uniform direction.

33. A method for improved adhesion according to claim 31, wherein the step of physically treating the surface comprises peening the film.

34. A method for improved adhesion according to claim 31, wherein the step of applying an optical coating comprises dipping the film incorporated onto the construct in a solution comprised of the optical coating and withdrawing the film.

35. A method for improved adhesion according to claim 32, wherein the step of applying an optical coating comprises dipping the film incorporated onto the construct in a solution comprised of the optical coating and withdrawing the film.

36. A method for improved adhesion according to claim 33, wherein the step of applying an optical coating comprises dipping the film incorporated onto the construct in a solution comprised of the optical coating and withdrawing the film.

37. A method for improved adhesion according to claim 32, wherein the step of applying an optical coating comprises dipping the film incorporated onto the construct in a solution comprised of the optical coating and withdrawing the film, and wherein the film is withdrawn from the optical coating solution in a direction substantially perpendicular to the grooves.

38. A method for improved adhesion according to claim 32, wherein the polarizing film has a stretch direction, and wherein the grooves are substantially aligned with the stretch direction.

39. A method for improved adhesion according to claim 37, wherein the polarizing film has a stretch direction, and wherein the grooves are substantially aligned with the stretch direction.

40. A method for improved adhesion according to claim 31, further comprising the step of applying an additional optical coating onto the applied coating.

41. A method for improved adhesion according to claim 31, wherein the optical-quality plastic part is selected from the group consisting of ophthalmic lenses, lenses, goggles, visors, shields, facemasks, polarized display devices, and windows that require low haze.

42. A method for improved adhesion according to claim 31, wherein the optical-quality plastic construct is comprised of a thermoplastic material.

43. A method for improved adhesion according to claim 31, wherein the film is comprised of polyethylene terephthalate.

44. A method for improved adhesion according to claim 31, wherein the caustic solution has a concentration in the range of approximately 10% to 30%.

45. A method for improved adhesion according to claim 31, wherein the optical coating is a thermal cured hard coat.

46. A method for improved adhesion according to claim 31, wherein the optical coating integrally bonds to the film after the step of applying an optical coating to the treated film.

47. A method for improved adhesion of an optical coating to a polarizing film incorporated onto an optical-quality plastic construct comprising:

physically treating a surface of the film by plasma exposure to peen the surface and thereby create a substantially uniform surface;

chemically treating the substantially uniform surface by plasma exposure; and

applying an optical coating to the treated film for effecting a coated, polarized optical-quality plastic part.

48. A method for improved adhesion according to claim 47, wherein the optical-quality plastic part is selected from the group consisting of ophthalmic lenses, lenses, goggles, visors, shields, facemasks, polarized display devices, and windows that require low haze.

49. A method for improved adhesion according to claim 47, wherein the optical-quality plastic construct is comprised of a thermoplastic material.

50. A method for improved adhesion according to claim 47, wherein the film is comprised of polyethylene terephthalate.

51. A method for improved adhesion according to claim 47, wherein the optical coating is a thermal cured hard coat.

52. A method for improved adhesion according to claim 47, wherein the optical coating integrally bonds to the film after the step of applying an optical coating to the treated film.